

An inaugural dissertation on

Fractitis

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Trachitis

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This disease, which is treated of by authors under a variety of names as morbus strangulatorius, cynanche stridula, angina ~~spasmodica~~, suffocatio stridula, asthma infantum, angina polyposa, and in common language termed croup, or hoars, the choak, or the steeping, most generally affects children. Selecting, especially those from the age of three months to five years, particularly those who have been the most healthy.

But occasionally it attacks adults; and we are informed by the distinguished professor of the practice of physic in this university, that he has met with it in children, even within the month.

Croup, it is generally agreed, is not contagious. And a child who has once been affected with the disease is very liable to returns of it upon slight exposure to cold; but then it is said, it appears in a milder form. It sometimes prevails as an epidemic.

This disease is divided into spasmodic and inflammatory;— coming on sometimes suddenly, but at other times

gradually, with the symptoms of a common cold.

In the latter instance the child for several days previously to an attack, appears drowsy, inactive, and fretful. The eyes are somewhat suffused and heavy; and a hoarse cough attends, which, from the beginning, has a peculiar shrill sound, that is said to resemble the crowing of a cock, or the bark of a small dog. The cough becomes more shrill, and by every fit of it, the patient is very much agitated; the face is flushed and swelled, and the eyes are protuberant. As the disease advances, there is great difficulty of breathing, and the fauces appear red, and in some instances a little swelled; but never in so great a degree as to impede the power of deglutition. The disease continuing, the respiration is performed with still greater difficulty, and with a hissing noise; the fits of coughing are more frequently repeated, the cough is most generally dry, but when there is any expectoration, it has most commonly a purulent appearance. Together with these symptoms, there

are much thirst, great restlessness, frequency of pulse, and occasionally, nausea. At length the breathing becomes more stridulous, the countenance changes, the cheeks assuming a purple colour, and the lips growing livid, till ultimately the child is cut off by suffocation.

The duration of this disease is various according to the degree of the more dangerous symptoms; which are the great difficulty of breathing, much anxiety, the frequency of the fits of coughing attended with no expectoration, and an irregular and intermitting pulse.

The most usual period of its termination is about the third or fourth day; though sometimes it proves fatal within twenty-four hours, and still more rarely, it is protracted even to the tenth day.

In the other form of the disease, the child is attacked, most commonly at night, with sudden difficulty of breathing, threatening immediate suffocation, and with the hoarse stridulous cough already de-

scribed. The face is flushed, the pulse quick and irritated, the patient is very fretful, and exceedingly uneasy, the eye is wild and the extremities cold.

This form of croup terminates fatally within twenty-four hours, or even within a shorter time, unless the appropriate remedies be employed.

Dr. Cheyne observed that, "when the child dies after an illness of three, four, or five days, there is found lining the windpipe a white membrane of considerable tenacity. It arises a little under the larynx, and is sometimes prolonged into the division of the trachea; and generally a quantity of a white fluid, like matter with which the lungs are filled, is seen purging up. The attachment of the membrane is slight, but the inner coat of the trachea is inflamed." To this membrane preventing the air from passing, the death of the child has been attributed. But professor

Chapman informs us, he has never met with it in his repeated examinations for this purpose. "The appearances, says he, I have observed in dissections relating to the larynx, were slight marks of inflammation with more or less of mucus, such as is formed by all the secreting surfaces." Dr. Baillie in his work on morbid anatomy remarks that, "when the inner membrane of the trachea is inflamed, it is sometimes lined with a layer of a yellowish pulpy matter. This does not adhere firmly to the inner membrane, but may be easily separated. It extends from the upper part of the cavity of the larynx, into the small branches of the trachea, which are distributed through the substance of the lungs. There is at the same time a good deal of mucus in the trachea and its branches, together with a mixture of pus. This is the appearance of the inside of the trachea in patients who have died from the croup."

Again it is stated by the late Dr. Bard, that, he has found the pulmonary organs so dense and solid from sanguineous congestion, that they exhibited the appearance of the structure of the liver. And in those cases where death promptly takes place, no marks of inflammation are found on dissection.

Croup then may be considered as a disease consisting either in a spasmodic constriction of the glottis, or in inflammation of the lining membrane of the larynx and trachea, which if not arrested extends to the minute ramifications of the bronchiae and terminates either in an effusion of lymph or mucus or in an engorged state of the lungs with blood constituting an "apoplectic state" of those organs.

We are, therefore, not to consider the adventitious membrane, which has been sometimes found lining the trachea, as altogether the cause of the fatal termination of this disease, but also

the congestion of the lungs either by mucus or lymph or by blood, as mainly producing death. And those cases where the attack comes on suddenly, are evidently attributable to spasms, for in these, post mortem examinations have revealed no marks of inflammation.

The most common causes of croup appear to be cold and moisture; and hence it more generally appears in winter and spring, and near the sea-coast; though inland situations and particularly those which are marshy are by no means exempt from it. Dr. Underwood observes, the change of food, from milk, which is easily assimilated to one requiring more digestion is probably a cause of this disorder. And Dr. Rush remarks, he has seen it accompany, as well as succeed, the small-pox, measles, scarlet-fever, and aphthous sore-throat.

In the treatment of this disease,metics

demand the first attention. The child should be made to vomit copiously, and for this purpose the tartarized antimony should be given; it being found the most effectual of the emetics. Professor Boerhaave's live-syrup, is also a valuable remedy.

The warm bath should be employed at the same time, for it assists the operation of the emetic, produces diaphoresis, which is a source of considerable comfort to the patient, and it furthermore aids in relaxing the spasm.

Bloodletting is a highly important remedy in the management of this affection, and should be used liberally, as the object is to subdue the inflammation in the crach, or to take off the spasm of the larynx.

The disease continuing we must have recourse to topical bleeding. If cups be used, they should be applied to the sides or back of the neck; for if placed on the forehead, they obstruct respiration. Leeches applied

to the larynx are productive of very beneficial effects.

Blisters are highly important remedies in croup, and are most serviceable when placed over the throat.

When, notwithstanding the vigorous employment of these means, the disease still continues, it is strenuously recommended by Dr. Chapman to bleed the patient *ad deliquium animi*.

"When pushed to this extent, he observes, I may almost say, that resuscitation is invariably successful. He yet I have never known one instance in which it failed. The moment that syncope takes place, the hoarseness, cough, impeded respiration, and fever disappear. Purging now becomes highly necessary. Calomel alone or combined with jallop or sspubarb, is the most appropriate cathartic. Dr. Rush recommends purging always after the use of emetics, if they fail of opening the bowels.

The *polygala senega* is highly recommended by Dr. John Archer of Maryland in every stage of this complaint. His mode of using it is in decoction; - half an ounce of the Seneka is boiled in eight ounces of water down to four. Of this he gives "a tea-spoonfull every hour or half hour, as the urgency of the symptoms may require, and at intervals a few drops to keep up the stimulus, until it acts either as an emetic or cathartic." But on account of the stimulating nature of this medicine it is unquestionably better adapted to the latter stage of the disease, as an expectorant to remove the troublesome cough, which is apt to follow the more violent symptoms.

But if we are not called until two or fifteen hours have elapsed, we generally find the patient labouring under one or the other of the forms of peripneumonia notha.

In the catarrhal suffocations, there are

difficulty of breathing, attended with wheezing, a discharge from the lungs in a greater or less degree, or sometimes none at all, yet the patient endeavours to cough up the accumulated matter, a languid pulse, and a cold and clammy surface.

But in the other form, although the respiration is exceedingly hurried panting, and laborious, little or no cough or discharge from the lungs attend; nor is there any wheezing. The pulse is full but irregular and disturbed.

An active emetic of tartarized antimony, ipecacuanha, the juice of garlic or onion, combined with calomel should ~~never~~ be exhibited, and the warm bath used, in order to remove the accumulations of matter in the lungs or equalize the circulation of the blood. And in the apoplectic state in addition to the remedies above enumerated, we are to take away blood, either by the lancet, or by cups, or leeches.

When



When the first mentioned means is adopted, we are to proceed very cautiously, - "taking away a little at once, suppress the flow, and watch the effect on the system." If it prove serviceable we are to repeat the operation, as circumstances shall render it necessary. But should the circumstances of the case utterly forbid the use of the lance, cups or leeches should be applied to the back.

Blisters are of the utmost utility at this period of the disease. They should be placed over the breast.

With the same intention of removing the collections of phlegm or mucus in the lungs, the hinc syrup formerly alluded to, ~~however~~ the emulsion of gum ammoniac, decoction of Seneca snake root, the antimonial wine, oxymel or vinegar of squills, and the carbonate of ammonia should be employed.

